



07-10-01

2815

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Brian A. Vaartstra et al. Group Art Unit: 2815
Serial No.: 09/603,132 Examiner: E. Lee
Filed: June 23, 2000 Docket No.: 150.0065 0102
Title: DEVICE STRUCTURES INCLUDING RUTHENIUM SILICIDE DIFFUSION BARRIER LAYERS (As Amended)

Assistant Commissioner for Patents
Washington, D.C. 20231

We are transmitting the following documents along with this Transmittal Sheet (which is submitted in triplicate):

- ☒ An itemized return postcard.
☐ A Petition for Extension of Time for __ month(s) and a check in the amount of \$__ for the required fee.
☐ An Information Disclosure Statement (__ pgs); copies of __ applications; 1449 forms (__ pgs); and copies of __ documents cited on the 1449 forms.
☐ A check in the amount of \$__, for __.
☐ A certified copy of a __ application, Serial No. __, filed ____, the right of priority of which is claimed under 35 U.S.C. §119.
☐ Other:
☒ Amendment and Response (9 pages total, including Appendix A (3 pages)).
☒ No Additional fee is required. The fee has been calculated as shown:

| Fee Calculation for Claims Pending After Amendment | | | | | |
|---|------------------------------------|-----------------------------|-----------------------------------|---------------------------|--------------------------|
| | Pending Claims after Amendment (1) | Claims Paid for Earlier (2) | Number of Additional Claims (1-2) | Cost per Additional Claim | Additional Fees Required |
| Total Claims | | | | x \$18 = | |
| Independent Claims | | | | x \$80 = | |
| One or More New Multiple Dependent Claims Presented? If Yes, Add \$270 Here → | | | | | |
| Total Additional Claim Fees Required | | | | | |

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 13,4895. Triplicate copies of this sheet are enclosed.

MUETING, RAASCH & GEBHARDT, P.A.
Customer Number: 26813

By:
Name: Mark J. Gebhardt
Reg. No.: 35,518
Direct Dial: 612-305-1216
Facsimile: 612-305-1228

CERTIFICATE UNDER 37 CFR §1.10:

"Express Mail" mailing label number: EL776904172US

Date of Deposit: July 9, 2001

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

By:
Name: Gerald L. Ludwig

(LARGE ENTITY TRANSMITTAL UNDER RULE 1.10)



PATENT
Docket No. 150.0065 0102

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Brian A. Vaartstra et al.) Group Art Unit: 2815
Serial No.: 09/603,132) Examiner: E. Lee
Filed: June 23, 2000)
For: DEVICE STRUCTURES INCLUDING RUTHENIUM SILICIDE DIFFUSION
BARRIER LAYERS (As Amended)

#5/B
7/13/01
Surles

AMENDMENT AND RESPONSE

Assistant Commissioner for Patents
Washington D.C. 20231

Dear Sir:

In response to the Office Action mailed April 10, 2001, please amend the above-identified application as follows:

In the Claims

Please amend claims 27, 30, 32, 34, and 36. The amended claims are provided below in clean form. Per 37 C.F.R. §1.121, amended claims are also shown in Appendix A with notations to indicate changes made (for convenience, all pending claims, including those added hereby, are provided in Appendix A).

27. (Once Amended) A semiconductor device structure, the structure comprising:
a substrate assembly including a surface; and
a diffusion barrier layer over at least a portion of the surface, wherein the diffusion barrier layer is formed of $BuSi_x$ using chemical vapor deposition, where x is in the range of about 0.01 to about 10.

Only
B1